KANSAS MEDICAL JOURNAL.

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MISCELLANEOUS.

Empyema.

BY J. W. WILHOIT, B.S., M.D., ST. GEORGE, KAS.

Pus in the pleural cavity is called purulent pleurisy or empyema. Empyema is generally a secondary inflammation resulting from some of the infectious diseases.

Of late years especial attention has been paid to the connection of pneumonia with empyema, and it has been shown that very many cases come on either in the course of or during convalescence from this disease; and it is a fact that by far the largest number of cases of empyema occur on the left side. Empyema may result from local causes as a fractured rib, etc. I will not attempt to give all the etiology, morbid anatomy and symtomatology of this very dangerous disease if left to itself to get well. I am of the opinion that thousands of people are carried off annually by empyema and the attending physician either did not get a correct diagnosis or was afraid to use surgical means until too late to be of any benefit to his patient. It is true a small number do get well: (*a*) by absorption, (*b*) by perforating the lungs, (*c*) by perforating the chest wall and other natural channels of outlet. But it is too great a risk to leave a case of this kind to nature when the chances to get well are so slim. I believe that empyema should be treated as an ordinary abscess by free incision and complete drainage.

I must confess that I have always taken the stand that to irrigate the pleural cavity was unnecessary and dangerous to the patient, but according to my recent experience I am led to abandon this idea. In order to more fully represent my opinion on the subject of empyema I wish to report a case that occurred in my practice recently.

I was called on January 18, 1895, to see C. W. R., aged about 40 years, and found him suffering from lobar pneumonia of the left lung. His temperature was 104° and all of the symptoms of pneumonia fully developed. On the tenth day the fever terminated by a crisis, and I told my patient I thought he would be up in a few days. His appetite was good and he said he felt so well that he thought he ought to be out at work, but in about five days he sent for me again and complained of a terrible pain in his heart and said his side felt heavy and that he thought he had heart disease. At a glance I could see that his left side was larger than the right, and as it is just the reverse in health I suspected that there must be some enlargement of the heart and I proceeded to examine him more carefully. I found the intercostal spaces almost obliterated and the percussion note was flat like a tub full of water, the heart was crowded out of its normal position and by auscultation I found that the left lung was not doing its work, and after I had finished my examination I concluded that I had a case of empyema and put my patient on treatment to try to carry off the fluid or cause it to be absorbed, but my patient got worse and told me if I could not stop the pain in his side and take that heavy weight from his heart he would surely die. I saw my patient on the 4th of February and he said he felt worse and after making another examination I found that the fluid extended to the clavicle so I told him that I wanted him to call another doctor and we would draw off the fluid and give him a chance to recover. So we sent for Dr. Smith of

Wamego and after giving him a thorough examination he confirmed my diagnosis and advised paracentesis. We proceeded to operate at once by making a vertical incision about two inches long in the seventh intercostal space down to the ribs and then passing a large sized trocar and canula just over the margin of the seventh rib so as to make a valvular opening and drew off about three pints of purulent fluid, after which we applied a pad of bichloride gauze and absorbent cotton over the opening and gave our patient a hypodermic injection of ¼ gr. sulph. morphia. The fluid continued to discharge at this opening for several days and our patient expressed himself as feeling much better, but finally the pus became so thick that the opening was too small for its exit and I made a small incision just over the rib, enlarging our opening and inserted a drainage tube and this time drew off about half a gallon of very thick offensive pus, and in the pus were large pieces of exudation that looked very much like old bacon or cheese. My patient not having the best of family history, and a cough setting in at this time much worse than it had been, I became alarmed at those tubercular symptoms and, notwithstanding the large opening in the side, the pus burrowed through the pleural wall and perforated the lung and he expectorated about two pints and when he would breath or cough the air would pass out at the opening in his side and make a noise like the bark of a small dog. So the microbes, as they are called, continued to manufacture this pus on a large scale and my patient being almost exhausted from night sweats and hectic fever I concluded to irrigate the cavity. I used 4 drachms of tr. iodine to a half pint of sterilized water and the first time injected 4 ounces and left it in the cavity and on the third day used 6 ounces and left same in the cavity. The discharge seemed to diminish rapidly after the first injection and the sixth day I injected 1 pint and left it in the cavity. By this time the discharge was very thin and almost checked so sealed up the opening and my patient made a good recovery and is around again and can do light work on his farm.

I wish to state that I gave my patient, as internal treatment: Syr. iodidi ferri xx drops three times daily, after meals, and iodidi potassii grs. v every 4 hours. I corrected the constipation of the bowels with sulph. magnesia once daily when necessary.

Perhaps older practitioners have had worse cases than the above to recover, but this I consider a grave one.

In Re White's Operation for Hypertrophied Prostate.

BY J. WILLIAM WHITE, M.D., OF PHILADELPHIA.

To the Editor of The Medical News.

SIR: Dr. Belfield, in the *Journal of the American Medical Association* for March 9, 1895, and Dr. Bangs, in the *Medical Record* for April 6, 1895, published under the heading "Warning Against Castration for Prostatic Enlargement," communications which, while they express some views with which I am in entire accord, contain, on the other hand, statements that hardly seem justified by the facts now before the profession.

No one could deprecate more than I the indiscriminate performance of the operation. I suggested it with great caution, laying before the American Surgical Association the line of thought and the experimental work that seemed to me to give the idea scientific standing. More recently I wrote (*British Medical Journal*, January 5, 1895; *Medical News*, December 22, 1894) that while the evidence then existing obviously and amply justified the original suggestion, I desired to call attention to the fact that I had not made it without hesitation. I added that, "having observed with disapprobation the undiscriminating assaults of some extremists upon the urethra, the tubes, and the ovaries, and more recently upon the appendix, I did not want to be responsible for a similar attack upon the testicles," and that I knew that "the step from experiment to operation is and should be a long one, and felt the responsibility involved in proposing a new operation, and especially one of this charac-

ter—easy of performance, with a low mortality, and intended for the relief of a condition of enormous frequency."

I am still most desirous of having the operation confined within its proper limits, and to this extent am in sympathy with the gentlemen mentioned.

But when Dr. Belfield says that while it is admitted that "castration may cause atrophy of glands, subsidence of edema, and relief of distress, but that it will not reduce the hypertrophied connective tissue is *a priori* probable;" and Dr. Bangs writes that "a theoretical operation, based upon observations upon dogs and eunuchs, in whom physiological atrophy of the prostate is said to be induced by the abrogation of its sexual function, cannot reasonably be applied with the expectation of getting the same results in elderly men in whose prostates hyperplasia has already taken place," and reiterates that the operation "is based on theory alone," they seem to me to ignore existing and conclusive evidence. This is now complete in every particular as regards the effect of bilateral castration on the majority of hypertrophied prostates. The experimental and theoretic stage has long since been passed. I have in my possession sections of a prostate taken from a patient that died after, but not because of, the operation, which show clearly that it does reduce the entire gland, and that the hypertrophied connective tissue shrinks and dwindles after the earlier disappearance of the glandular elements. But that this assertion may not rest on my statement I would quote Mr. Joseph Griffith, F.R.C.S., Hunterian Professor of Surgery and Pathology in the Royal College of Surgeons, England, who has recently reported on the condition of an enlarged prostate eighteen days after double castration. He describes in detail and figures (*British Medical Journal*, March 16, 1895) the changes which had taken place, summing up as follows: "In short, the cell-elements first proliferate, and ultimately disappear, leaving a comparatively small amount of fibrous connective tissue in their place. . . . The gland, whether enlarged or normal, undergoes certain degenerative changes after removal of the testicles which lead to its conversion into a small, tough, and fibrous mass in which there are only remains of the glandular tubules and ducts."

As to the clinical evidence Dr. Bangs urges that, to test the results of the operation, "the size of the prostate should be determined by three examiners, and the examinations repeated with sufficient frequency to determine positively the size of the organ." These conditions, which are somewhat rigid, have been complied with in all my own cases, in one of which the estimated shrinkage of the size of the prostate from that of a small orange to that of a walnut took place in a week. A half-dozen examiners confirmed this, and several hundred medical students saw the patient and learned directly from him of the concomitant and remarkable improvement in his symptoms. Dr. Lilienthal, of New York, two weeks after the publication of Dr. Bangs' letter, published the report of a case (*The Medical Record*, April 20, 1895) which so completely answers all Dr. Bangs' theoretic objections as to be conclusive in itself. I may add, however, that I have now notes of similar cases to the number of nearly 100, in most of which all previous palliative treatment had failed, and in which the results have been equally striking. It seems to me too late to say, as Dr. Bangs does, that the relief appearing within a few hours has been too positive to be attributed to the operation itself, because "it hardly seems rational to believe that a hyperplastic organ in which, no doubt, there has been an increase of the connective-tissue element, should diminish in size within a few hours after castration has been performed." The facts are against him. The hyperplastic organs do diminish in size, and often in an almost incredibly short space of time.

Both the gentlemen who have been moved to warn the profession emphasize the possibility of mistake in diagnosis, Dr. Belfield going so far as to say that "whenever a case of real or supposed prostatic enlargement demands operative relief this should always be an incision into the bladder." I am quite willing to admit that there must be some doubtful cases, and that in these and in a

certain proportion in which the diagnosis is certain a cystotomy will often be desirable. But it is assuming altogether too much to claim that this is "always" proper. I have not found the great majority of cases of prostatic hypertrophy difficult of recognition nor of classification by combined rectal and instrumental exploration. But if I may be thought to be mistaken as to this and other similar questions raised by these gentlemen, it is hardly likely that Fenwick and Moullin and Griffiths in England, Bereskin in Russia, Helferich and Meyer and Hænel in Germany, Ramm in Norway, Watson and Warren in Boston, Halsted and Finney in Baltimore, McBurney and Stimson and Pilcher in New York, Andrews in Chicago, Souchon in New Orleans, Walker in Detroit, Haynes in Los Angeles, and a dozen other surgeons of more or less prominence have been wrong as to their diagnosis, or in saying that previous palliative treatment has failed, or unreliable in their descriptions of the rapid and sometimes astounding shrinking of the gland and disappearance of the subjective symptoms, even including long-standing cystitis. They are all now on record to this general effect at any rate.

Dr. Belfield alludes to a case in which a patient with a large prostate, "evidently inflammatory," and severe cystitis, by suprapubic incision, to have a small calculus, previously undetected. He adds: "Prolonged vesical drainage was followed by great reduction of the prostatic enlargement and by a symptomatic cure." He then imagines with apparent horror the status—professional and legal—of the surgeon, who might have done castration, when the calculus was subsequently discovered. This sort of argument appears to me to be misleading, as it lacks necessary detail. The age of the patient, indicating the value of the testicles from a sexual standpoint; the relation of the calculus to the enlargement of the prostate—*i. e.*, whether cause, which would be rare, or effect, which would be common; the period indicated by the word "prolonged;" the presence or absence of a urinary fistula; and the exact condition called a "symptomatic cure," should all be known before any such comparison could be drawn. I mention the case because in a gentleman, aged 76 years, with a large prostatic hypertrophy and a secondary calculus, which had formed after a previous lithotomy, and which lay in a deep post-prostatic pouch, I have within the last month deliberately performed castration as a primary operation. Two weeks later, the prostrate having shrunken to one-sixth its former bulk, the residual urine having disappeared, and the cystitis (in spite of the presence of the calculus) having almost vanished, I crushed and evacuated the stone. The patient was sent to me by Dr. Schum, of Huntingdon. He went home free from all symptoms.

Dr. Belfield says, finally, that "the claim that double castration is safer than drainage, is not, in his experience, warranted, if drainage be made either by perineal urethrotomy or suprapubic incision in deux temps; the danger in cases that really demand operative interference is the anesthetic, not the knife." But drainage in most cases is only a palliative measure, and, if permanent, is a source of more or less continued danger and of great discomfort to the patient. Dr. Belfield has very properly described it under the head of "Palliative Operations" in an article that he has published elsewhere. It is not fair, therefore, to compare it at all with a measure that in properly selected cases is curative, and which thus challenges comparison with the various forms of prostatectomy. He might almost as well have written of the mortality of catheterism, which also gives great relief in some cases. As to the anesthesia, as double castration can easily be performed within three minutes, it seems unlikely that any serious objection to the operation will prevail on that account. I have on several occasions completed it in a little less than three minutes before the class at the University of Pennsylvania, and without undue haste. In regard to the general question of mortality, however, I may be pardoned for quoting from a personal letter from Sir Joseph Lister, who writes me: "I am glad to see from the cases that have been published that your

remedy has proven so effectual in this most distressing class of patients. If I have any fault to find with you in speaking of the advantages of your procedure, it is that you seem to me to underrate them when you say that castration is an operation of little danger. You might, I think, have truly said that if it is performed with sufficient antiseptic precautions it is entirely free from danger. The rapidity of the relief afforded seems to me as remarkable as it is satisfactory. Allow me to congratulate you cordially on this valuable addition to our art."

My personal and professional regard for the gentlemen who have criticised the operation, and my knowledge of their sincerity of purpose, have led me to reply at such length; but I also have been actuated by a desire to have both its merits and demerits kept fairly before the profession. There is much yet to be determined in regard to it, especially as to the selection of suitable cases and as to its remote effects; but I think I may fairly claim that the existing evidence—experimental, pathologic, and clinical— removes it from the region of theory and speculation, and demonstrates its applicability to a large proportion of cases of hypertrophy of the prostate.

Dr. Bangs' statement that "if this theory could be proven, about one man in three, after the age of 50, ought to submit to castration in order to prevent enlargement of his prostate," is an extension of the operative field which must be regarded as peculiarly his own. I have as yet not considered the subject from the standpoint of early prophylaxis. As the theory is proved, it would be interesting to know how Dr. Bangs proposes to select his cases.

Notes on the Application of Electricity.

The following are notes taken from the clinic at Bellevue Hospital, New York, by J. A. Henry, M.D., and published in a recent issue of the *Gross Medical College Bulletin:*

Locomotor Ataxia.—The tendon reflex is absent in ninety-nine per cent. of the cases. In the treatment of this disease, apply electricity to the spine, in the form of galvanism. Place anode over the cervical region; the cathode over the dorsal region.

Central Galvanization.—Apply one pole to the nape of the neck, and the other to the epigastrium. As a rule place the positive pole at a distance from the affected regions.

Neurasthenia or Hypochondriasis.—Treatment; cups on spine; counter irritants; restoratives; general faradization; one electrode in cervicle region, the other on soles of the feet.

Hemiplegia.—Electricity should not be used until the acute symptoms have disappeared. Apply one sponge to the nape of the neck, and the other to the affected muscles. Continue eight or ten minutes.

Diphtheric Paralysis.—Apply the faradic current to the affected muscles. When deglutition is interfered with, place one sponge on each side of the larynx.

Asphyxia of the new-born infant.—Place one pole over the spine, between the scapulæ, and the other over the epigastric region. Do not apply the electrode to the side of the neck, lest it come into contact with the pneumogastric nerve and thus arrest the heart's action.

Torticollis.—The galvanic current will relax the spasms on the side toward which the head is drawn. The faradic will strengthen the relaxed muscles of the opposite side.

Asthma.—Use the galvanic and faradic currents alternately.

Neuralgia.—If the pain is superficial and increased by pressure, use the galvanic; if it is deep, and for lumbago, without tenderness, use the faradic.

Facial Paralysis.—Use a gentle galvanic current, and stroke the sponge over the course of the nerves.

Headache and Head Affections.—Galvanic two cells for sixty seconds. For browague place one sponge on the brow and the other on the nape of the neck with five interruptions.

The galvanic continuous current, while in action, changes the nutrition of the parts; the farradic current acts mechanically upon the motor and sensory nerves, stimulating the muscles to contraction. When paralyzed muscles do not respond to the farradic, the galvanic is indicated.

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Topeka, Kansas, Saturday, May 25, 1895.

Diet.

The question of diet has been so frequently discussed by the profession and by the laity that one of the first things a physician is expected to do is to tell the patient what to eat. Unfortunately for the patient the physician is often too ready to do so. Diet becomes as much a hobby with physicians as a great many other things. We will not for a moment dispute the importance of prescribing for the patient just such food as will be best digested, most readily assimilated and best counteract the effects of the disease process but, unless we can understand both the chemical and physiological processes of indigestion and assimilation in all their intricacies, unless we can know just what chemical changes have taken place in the digestive tract and just what influences may be deranging the physiological functions, by what process of reasoning may we decide what foods are best for our patient?

In certain forms of disease it is true we have learned to restrict the diet to liquids or semi-solids, but it is not really because we know these foods give our patient the best support, but because we have learned that they are less dangerous to those lesions existing in the intestinal tract. In those chronic ailments of digestion, which furnish the most frequent temptation to diet prescribing, no absolute rule can be followed and no benefit can be derived unless we take into consideration all the factors which may in any manner disturb digestion. Atonic dyspepsia for instance is one of the troubles where diet prescribing is a very uncertain proceeding. To prescribe a diet to anæmic or nervous individuals often means diminished nutrition and increased digestive disturbance. As a rule such patients eat too little and especially too little of a variety. A vivid imagination, greatly exaggerated by their condition, is usually sufficient cause for a gradual exclusion of different foods until the patient is trying to subsist upon milk and crackers, or perhaps stale bread and tea. It does not seem a reasonable solution of such a difficulty to prescribe a regulated diet for the very article of food we exclude may contain the very nutritive properties most needed by the starved and depraved tissues.

It is more difficult to persuade these patients that they can eat anything they desire than to persuade them to eat nothing at all, and yet a general diet is the surest road to cure. Many people have indigestion because they are anæmic and poorly nourished and it seems to us that a restricted diet in such cases would be totally out of place. We would say then to the physician who has a diet hobby: Learn first every probable chemical or physiological change that may take place in the digestive tract and the definite relations between each article of food and these changes. In other words secure some definite knowledge of the final

analysis of all food elements introduced into the human economy. Then remember that each is an individual case and the diet you prescribe for one patient is in all probability totally unsuited to another one. Remember again the great influence of the mind upon digestion and the tendency to introspection usually found in these patients. We think it will be understood that we have no intention here to approve of gormandizing but, until we can better understand the process of assimilation, the appetite is a better indicator than our diet book. Pain in dyspepsia is a poor indicator and often food which produces the most pain at one time may be the most innocent at another.

We believe a good substantial nourishing diet, selected to suit the individual taste of the patient, is far better than any selection we may make from a scientific standpoint with our present knowledge of nature and her processes.

New York Notes.

NEW YORK, May 21.

Last week Prof. Carpenter performed a Cæsarian section. The operating room was crowded, standing room being at a premium. The operation was very cleverly and quickly performed, and mother and child are both doing well.

Last Sunday a clinic was held at Harlem Hospital: Amputation of leg for gangrene of foot; amputation of thigh for incurable tubercular disease of knee joint; removal of sarcoma of neck.

Clinics have been held every morning this week at 7 o'clock at Randall's Island Hospital, and those who could stand the strain of such early hours attended.

Prof. Powell has performed several craniectomies on children this week. His method of operating is very ingenius. He trephines the skull at the different points at which he desires to remove the skull, inserts a thin strip of metal between the skull and the dura, and removes the bone by cutting down upon the metal with a circular electric saw. He does not suture the scalp at all, bringing the edges of the wound together by rubber adhesive plaster. He is very enthusiastic over the operation, and claims to have reduced the mortality to almost nothing.

Prof. Edebohls operated this week for floating kidney, fastening the kidney to the posterior abdominal walls. He claims that out of all the women who come to him for treatment for pelvic or abdominal trouble, one out of every four has a floating kidney.

Treatment of sarcoma by injection of the cultures of erysipelas toxines is being practiced here to a considerable extent, and it is claimed with great success, especially in the treatment of large-celled sarcomas.

Prof. Kelsey performed cœliotomy for chronic diarrhea caused by ulcerations of the bowel high up. He suspended the colon over a ligature through the abdominal walls, protected by shields, sewed the bowel fast to the wound, and opened the bowel twenty-four hours later.

Twice a week Prof. Fischer holds clinics on the diseases of children at the German Poliklinik. There is a never-ending stream of material for these clinics, and the course on diseases of children here is the best given in the school.

Friday Prof. Phelps performed excision of the knee joint for tuberculosis in a patient who was quite weak, and it was just ten minutes by the watch from the time he made the incision to the time when the last plaster of paris bandage was put on. He removed the patella, sawed off the ends of both bones, approximated them neatly, and cut away all diseased soft tissues with the scissors. He says he is never over fourteen minutes in performing the operation, and thinks it is desirable to perform the operation as rapidly as possible in order to avoid ether shock.

Friday night the orthopœdic section of the Academy of Medicine held a meeting at which Dr. Teschner read a paper on "The Treatment of Postural Development of the Trunk by Means of Rapid and Thorough Physical Deformities." He exhibited several cases of spinal curvature which had been cured by means of rapid physical development. He makes the patient exercise

until thoroughly tired, claiming that unless the muscles are worked until they are tired no good will result. He uses no supports, braces or jackets whatever during the treatment.

This afternoon I went to the Roosevelt Hospital to see McBurney operate. He is a very good operator, but having a large corps of assistants clustering around him it is almost impossible to see any part of the operation. The clinic was held in the Sims operating room, which is very fine.

Last night Prof. Morris performed skin-grafting by the method of blistering the skin which he desires to remove, and after the blister is well formed remove the skin by cutting around the edge of the blister. He also operated for stone in the bladder in an old man and removed a very large stone. He also operated for appendicitis in an old man for a chronic inflammation of the appendix which had existed for years.

Speaking of operating for appendicitis a certain surgeon here not long since operated with the intention of removing the appendix. Before he opened the abdomen he palpated the appendix, described its contour, size, hardness, etc., but on opening the abdomen no appendix was to be found. Presumably repeated attacks of appendicitis had totally destroyed the appendix, but just what the operator palpated before the operation is what is still agitating the minds of those who witnessed the operation.

J. M. FRANKENBURGER, M.D.

A Method of Restoring Persons Apparently Dead from Chloroform.

Chas. A. Leedham-Green, M.D., in Birmingham Medical Review.

In most of the cases of chloroform death the cardiac symptoms predominate over the respiratory. If the difficulty is confined to respiration, the means for its relief are excellent. But none of these means will answer when the heart suddenly fails, because they affect the circulation indirectly. The means now in use, such as hypodermics of strychnine, ether, inhalations of amyl nitrate, and cutaneous stimulation, are of use only when the outset is gradual. They are useless when the heart suddenly fails.

Dr. Maas described a method which is a modification of one suggested by Prof. Konig. Konig's method was to have the operator stand on the patient's left side, facing him, the open hand on the patient's chest, with the ball of the thumb between the apex beat and the sternum. Then, at the rate of thirty times to the minute the chest wall was pressed in with a quick, strong movement. Dr. Maas modified this when, upon trying it on a boy of nine years, the pulse and respiration ceased and the boy was considered dead. The doctor, becoming excited, commenced to press more rapidly, about 120 to the minute, and in a short time the boy began to revive. This compression was continued for fully an hour, and the boy recovered. Since then this quick compression has been invariably used in the Gottingen clinic with the best results.

The author tested this method several times, and in one case particularly was much impressed with its value. A boy of four months was chloroformed (for circumcision). He took chloroform well, the operation was almost concluded, and the mask had been laid aside, when suddenly he became deadly pale, pupils dilated, respiration and heart action ceased. The head was at once lowered, and the tongue pulled out. Sylvester's method of artificial respiration was tried without result. For a few seconds he was held up by the heels, and Sylvester's method again tried after the inversion, but without avail, the anesthetist declaring the child dead. The author then entered the room and examined the child. There was no heart impulse to be felt; respiration had completely stopped. The body was pale and cold; eyes shrunken and pupils dilated; collection of froth appeared at the mouth and nostrils. The method described above was then commenced and kept up for fully three minutes, when a slight gasp was heard, followed in a few seconds by another. A little later a weak heart throb was heard and in a minute or two the child began to cry. The points of interest in this case are:

1. The length of time (seven minutes) during which neither heart-beat nor respiration could be detected.

2. The futility of Sylvester's method, inversion or ether.

3. The complete recovery of the patient under rapid and forcible heart compression.

The efficacy of the method lies in its direct action on the heart, restoring both respiration and circulation. On a fresh cadaver a distinct pulse-wave can be felt in the carotids on forcibly and quickly compressing the precordium, and the pupils will be found to contract as the blood fills the iris capillaries. Although the method is easier upon the flexible walls of a child, yet age does not prevent its use. Provision must be made for the free entry and exit of air to and from the chest.

The Trophic Properties of the Nerves.

Gaule in Berlin Klin. Wochenschr.

The contention of the author is that trophic properties are not dependent upon special trophic nerves, but that such properties are furnished nerves by there ganglionic cells. To the objection of Eckard, that if such be a fact then we should not get atrophy by section of the trigeminal centralwards from the Gasserian ganglion, which the latter has frequently produced, Gaule replies that he has repeated the experiment of Eckard and is convinced that the nerve contains as far as this point; *i. e.*, a point considerable distance from the pons a great number of ganglionic cells.

Injury of the third, fourth, fifth and sixth spinal ganglion in the rabbit is followed by trophic troubles in the skin, the glands and muscles, not alone on the same side as the injury, but on the other side as well; and not alone in the territory of the corresponding ganglion, but also in the territory of other nerves. When the ganglion has previously been denuded, irritation and lesions are without result. The alteration which it produces in the ganglionic cells effects results by being carried to the spinal cord through the posterior roots. In order to obtain trophic lesions in the rabbit which shall be confined to the same muscles, the author experimented on the inferior cervical ganglion of the sympathetic. The changes that followed were in every instance confined to the same portion of the brachial biceps, and the psoas iliacus, and showed identical characteristics. As in some of the cases, the affected muscles were on the same side as the experiment was performed on, sometimes on the opposite side, and sometimes the muscles of both sides, one is obliged to admit that the transmission was effected through the spinal cord by the aid of the communicating branches of the sympathetic with the spinal nerves.

Gaule was able to follow the evolution of the alterations which went on in the midst of a muscle by the aid of his discovery of a nerve which stopped at a place adjoining the spinal ganglion. The irritation of this nerve-branch made the ganglion insensible to excitation, in spite of the fact that that section of the nerve caused exaggerated ganglionic sensibility. A few moments after excitation of the ganglion the muscle lost at one point of its surface its soft silken feeling. Then appeared a liquid at this point, and the surface of the muscle began to show lowered nutrition and to become rugous.

This depression involved the entire muscle, both on its external and internal surface. In the median portion it extended as far as the tendon, from which it was separated by a languette. In from five to ten minutes an ulceration was produced which was characterized by its very red color and with elevated borders. Often the ulceration was so extensive that it sufficed to cut the muscle in two. Not infrequently a considerable hemorrhage followed or attended such ulceration, and this hemorrhage penetrated into the neighboring muscular fibres and the connective tissues. The succession of phenomena in such conditions is as follows: The first alteration is a softening or liquefaction of the muscular fibres at the determinate point. The fibres do not break down unless there is a contraction or distension of the muscles, but rather because of the nor-

mal state of tension of the muscles which the altered fibres are no longer capable of resisting. Once the fibres break, their loose ends retract themselves, thus forming a nervous thickening around the ulceration. From the very beginning one is able to distinguish microscopically in the muscular fibres cavities which become filled with liquid in spite of the fact that the rest of the substance continues red as it appoaches the interior of the sarcolema.

A New Method of Treatment of Acid Dyspepsia.

Dr. J. Bergmann in Berl. klin. Wochnschr.

Although the pathological anatomist gives several explanations for acid dyspepsia, we must, when considering the treatment of such cases look upon them as classed under one head, and as being a condition in which there is present an excessive amount of acids in the stomach.

In all cases, excepting those in which there is a fermentation in the stomach, the increased amount of acids can generally be referred to the blood. A certain degree of alkalinity is necessary for the proper nourishment of the tissues, and every surplus of acid in the blood is led into the stomach. The author cites experimental results, which go to prove this statement. Thus, it is a well known fact that acid dyspepsia is an almost constant companion of the diseases of the acid diathesis, such as gout, chronic rheumatism, diabetes, etc. The system relieves the blood of the injurious acid and leads it to that organ, in which it is most apt to prove of use to the animal economy, viz., to the stomach, where it can act as a digestive agent.

But this curative property of nature is frustrated by a complication arising from the saliva. This secretion loses its normal reaction, turning acid, when the alkalinity of the blood is reduced. But an acid saliva cannot fulfill all the functions of a normal salivary secretion, in as far as it cannot neutralize any excess of acid in the stomach, as the normal saliva does. And in all cases of acid dyspepia, not dependent on any diathesis, the saliva is not sufficient alkaline if it is not acid in reaction.

These considerations compel us to seek a substitute for the saliva in the treatment of such cases—some substance which will neutralize any surplus acid in the stomach. Bicarbonate of soda and magnesia have been used, but fail to do good in a great many cases. Boas has shown that 12 grains of bicarbonate of soda are necessary to neutralize a gastric juice containing 3 per cent. hydrochloric acid.

The administration of such a quantity of drug is impracticable, if only for mechanical reasons. And, in fact, such a dose is very rarely, if ever, given, as patients are generally told take "as much as will go on the point of a knife," which is, to say the least, a very indefinite quantity. The author, therefore, was led to look to the saliva, rather than to the gastric juice as the proper place to apply treatment. The saliva must regain a sufficiently alkaline reaction.

Now, saliva is not a transudation from the blood, but is a secretion produced by the specific activity of the cells of the salivary glands. What we need, then, is a stimulus to this glandular activity, and we find that the most active physiological stimulus to the salivary glands is the act of mastication. And, indeed, it has been clearly shown that the saliva, during mastication, has an alkaline reaction in every instance.

And this corresponds exactly with the experience that the symptoms due to hyperacidity disappear while the patient is eating, but reappear some time after the meal, during the period of digestion. During the meal the act of mastication calls forth a copious flow of alkaline saliva, which neutralizes the surplus acid in the stomach, and thereby prevents the appearance of any symptom. In the period of digestion, however, during which time there is no mastication, the secretion of saliva is arrested, and consequently the surplus acid is not neutralized, and therefore causes the troublesome symptoms. And yet, this beneficial regulating quality of saliva is needed most during this particular period.

These considerations have led the author to have such patients chew continuously during the period of digestion, and he has had remarkable results in every instance. After having tried several substances as masticatories he finally had tablets made up of some substance suitable for chewing, and used as adjuvants ginger and calamus roots and magnesia.

The excellent results the author has had from this line of treatment have convinced him that his explanations, as given above are correct, and he believes that the simplicity and efficacy of such a treatment should recommend its use to physicians in general.

Medical Expert Testimony.

St. Louis Medical and Surgical Journal.

As every one knows there are various grades of this, and quite a comprehensive review of the subject appears in the *Columbus Medical Journal* from the pen of Judge Malcolm Kelly.

It has sometimes been made a matter of complaint, by medical men, that the law does not prescribe some fixed standard of knowledge and skill that shall be requisite to qualify one to give medical expert testimony, and thus shut out quacks and pretenders. A very little reflection, I think, will show that these complaints are unreasonable. To establish such a standard, or to conform to it after it should be established, would require something more than human wisdom; and if it could be established today, in the advancing state of arts and sciences, it would be worthless tomorrow.

Expert testimony is constantly being offered upon questions relating to all the different arts, trades and professions. From the nature of the case, no fixed and definite criterion of knowledge and experience for each class of experts is practicable. All that the law seems to require to constitute an expert is that the witness shall have such peculiar knowledge, not possessed by men in general, of the art, trade or profession under consideration, derived from special study, observation or practice of it, as will enable him to express an opinion of some value upon the subject.

That a witness is allowed to testify as an expert does not imply that his opinion is of any great value. The court only determines the admissibility of his evidence—not its weight. Whether of great value or little value, the party who offers him as a witness is entitled to his testimony, and the jury must be left to put the proper estimate upon it.

By far the most effectual safeguard against ignorance of the witness, is cross-examination. This, notwithstanding its abuses, is after all the most efficient means that has ever been devised for eliciting truth and detecting error and falsehood. Here every mountain of pretense is brought low; every valley of concealment and evasion is filled; the morally crooked is made straight; fanciful theories are exploded; the charlatan and pretender are unmasked, and the evidence in the case is placed before the jury at last in its true character and at its real worth. This result, or course, is not always attained, but it seldom fails of accomplishment in able hands.

The Gouty Heart.

La Courrier Med.

M. Mitchell Benge has published a clinical paper on the cardiac manifestations of commencing gout. He starts with the idea that the gouty process acts on the coronary arteries and nervo-muscular elements of the organ, and, thus being impeded in action, either temporarily or permanently, undergo hypertrophy. The clinical signs are as follows: The disease is ordinarily seen in persons about middle age, of sedentary habits and easy life. In most cases they have been subject to articular pains, sciatica or lumbago, skin disease, nervous disorders, or disorder of the alimentary canal, especially diarrhea. Insomnia is not infrequent; also some catarrh of the urinary organs. It is then that the heart commences to take part in the symptoms. After some excess the patient is seized with precordial pain, fre-

quently of anginal character. This state may exist for some time and the heart may be irregular in its action. The patient is generally much taken up with his condition. The pain may be essentially cardial, and may vary in its character. Palpitations are frequent, and syncope sometimes is seen.

Physical examination is often negative; the impulse is weak; the heart is hypertrophied. Valvular disease is absent. The first sound is weak at the base and doubled at the apex. The second sound is less clear than the exaggerated arterial pressure would indicate. Physical signs vary with each case. In some cases there is no hypertrophy, while in others valvular lesions are present. The pulse is generally frequent; sometimes irregular or intermittant. Arterial tension is sometimes strong; sometimes weak. The diagnosis is difficult if the cardiac signs are the first symptoms of gout, but the mistake must not be made of considering every case of non-valvular disease of the heart as being due to gout. It must be distinguished from:

1. Schioses, with hypertrophy.
2. Bright's disease (vascular lesions.)
3. Senile degeneration (convincing.)
4. Tobacco heart.
5. Old valvular lesions, without murmur.

The prognosis so far as life is concerned is good. The disease is of long duration, and may be alleviated greatly. Treatment includes exercise in open air, nourishment, alkaline waters, no malt or vinous liquors, or tobacco. For drugs, mercurial purgatives, iodide potassium, arsenic, strychnine, digitalis and strophanthus must be used cautiously. For the anginal symptoms the usual remedies are employed.

An Object Lesson for Anti-Vaccinators.

New York Medical Times.

The *Official Bulletin* of the Iowa State Board of Health for the month of February contains a statement as to the result of the introduction of small-pox infection to an isolated household, the members of which differed in regard to vaccination. We produce Dr. Kennedy's account in his own words. The facts need no comment:

"A few months ago a family of anti-vaccinationists lived in a county in this State. One member of the family—consisting of father, mother and four children—was vaccinated, the others not. They lived happily, and apparently safely, so far as small-pox was concerned, on their quiet Iowa farm. A nephew from Germany came into the family, coming from the Fatherland to find a home in this great land. On the vessel on which he was a passenger small-pox broke out, and he was exposed. He had been vaccinated and escaped the disease. His uncle's family, into which he went with his infected clothing, with the exception of the mother, were destitute of the protective influence of vaccination. Within twelve or fourteen days after the advent of this nephew and cousin, small-pox in a malignant form broke out, and father and four children were smitten down with the dread disease, and four out of the five, including the father, died, the mother and young man alone escaping, and they simply because they had been fortunate enough, sensible enough, to be vaccinated. And yet the anti-vaccination fanatics would ignore all such lessons, and see nothing in them except a coincidence."

Ichthyol in Pulmonary Phthisis.

Dr. Scarpa in British Medical Journal.

At a recent meeting of the Royal Academy of Turin, the author communicated the results obtained in 150 cases of pulmonary phthisis treated with ichthyol between April, 1894, and January, 1895. Having referred to the favorable results of the treatment reported by Dr. Cohn of Hamburg, in 100 cases of the same disease, the author pointed out that from what was known of the action of ichthyol as an astringent of the vascular system, as an antiseptic, as a disinfectant of the digestive apparatus, and as an ailment d'epargne, it was a priori presumable that it would be useful in phthisis.

He employed the drug in the purest possible state, dissolved in the proportion of

one-third in distilled water or any suitable vehicle. Of this solution he gave from 20 to 180 or 200 drops, dissolved in water, in the course of the day.

The remedy was in all cases well borne. No other treatment was employed beyond attention to the hygienic environment and feeding up. Of the 150 cases 23 died; all these were in a desperate condition before the treatment was begun, but even in them the ichthyol appeared to do good. Of the remaining cases 17 were apparently cured; in 50 there was notable improvement; in 23 there was some improvement; in 28, up to the date of report, the treatment had produced no effect.

The good effect of the ichthyol shows itself first in the influence which it has on the symptoms produced by the local lesions—cough, expectoration, dyspnea—afterward on the general condition. Physical examination shows profound modifications in the lesions, especially in the circumscribed infiltrations of the early stage, but also not infrequently in those of the breaking-down stage.

Metrorrhagia and Ruptured Hymen Caused by Bicycle.

Paris correspondent Medical Record.

The bicycle craze is spreading and several of our most eminent physicians may be seen almost any Sunday morning wheeling gracefully and quietly along the now shady avenues of the Bois de Boulogne.

No question has aroused more discussion and difference of opinion in the Academy of Medicine than that of bicycling—indeed, it was discussed at several stated meetings, being warmly advocated by some, and as strongly condemned by others. The consensus of the Academy's opinion seems to be that moderate exercise on the bicycle is advisable in neurasthenia, anemia, dyspepsia, gout, and obesity, in all cases of slowness of nutrition, and where moderate muscular movement is required. It is absolutely forbidden in phthisis, organic disease of the heart, and albuminuria. Married women and young girls are fast following the example set them by the men—the latter, especially. For them it is not ill-suited but dangerous. The writer knows of two cases of metorrhagia brought on by mild bicycling, and another of ruptured hymen from falling on the pummel. Some have immovable bicycle in their bedroom, the framework being screwed to the floor and the wheels moving just as on the road. The amount of injury done to the pelvic organs of young girls just reaching womanhood will not be long in making itself felt in the shape of uterine versions and flexions, or cellulitis, to say nothing of other such serious complications as those mentioned above. The Parisian gynecologists will undoubtedly soon have more than they can conveniently attend to if matters continue as they have begun.

Diagnosis of Pelvic Inflammatory Disease.

American Journal of Obstetrics.

Dr. Kelly, of Baltimore, in a recent paper drew attention to the following facts:

1. His remarks were addressed for the most part to the general practitioner.

2. The history of the patient and sensitiveness over the ovarian regions, whether by deep abdominal or vaginal palpation, can but rarely *per se* establish a diagnosis of pelvic inflammatory disease.

3. An attempt to make a diagnosis without directly palpating the disease is at best clever guesswork.

4. The diagnosis can be made with certainty when resisting masses are felt choking the posterior half of the pelvis at the sides of and behind the uterus.

5. It is possible to mistake in this way a retroflexed fundus, an extra-uterine pregnancy, a myoma, or a carcinoma for inflammatory disease. The error, however, will be in the right direction and not to the injury of the patient when she comes into the hands of the specialist.

6. For a more delicate appreciation of the exact condition of the pelvic organs, and in

most cases in order to make the diagnosis at all, a bimanual examination by rectum and abdomen under anesthesia is indispensable.

8. The trimanual examination, acting at the same time by rectum, vagina, and abdomen, is the most delicate method of all, serving to detect the slightest irregularities in uterus and ovaries, as well as the most delicate adhesions.

8. Finally, constant practice, utilizing every available chance, will alone enable a man in general practice to appreciate these points so simple to the trained nurse.

Acetanilide as an Antiseptic.

Dr. Thos. S. K. Morton in Philadelphia Polyclinic.

Dr. Morton is the author of a lengthy paper on this subject, embodying observations upon the use of acetanilide in 1,000 surgical cases. From this paper we make the following deductions:

The action of acetanilide upon wounds, especially granulations, when used in full strength, is to produce intense dryness and blueness, and at once to check and prevent the formation of pus. If a very large surface is exposed to the action of the undiluted drug, toxic symptoms may manifest themselves in susceptible individuals. Under no circumstance does acetanilide irritate the skin or wounds. All ordinary suppuration ceases in the presence of acetanilide, even when much diluted. Abscess cavities, boils, and carbuncles, when opened, and dirty, greasy wounds produced by machinery, heal, as a rule, without further suppuration, and in an unusually short time, under the use of acetanilide, applied either in substance, or as gauze, or ointment (1 in 8), or dissolved in alcohol, water, or oil (as injection.)

Tuberculous lesions appear to be affected in a much better manner by acetanilide than by iodoform. Tuberculous bone cavities have healed rapidly under 10-per-cent. acetanilide gauze. Fistulas have instantly taken on a healthy appearance after injection of alcoholic, watery, or oleaginous solutions of acetanilide, and have quickly closed. Upon chancroids the effect of this drug is, perhaps, most surprising of all. The patient is first directed to wash several times daily, and to rub in the dry powder. The powder usually forms a crust, which prevents excoriations by urethral discharges and otherwise helps the healing process.

It thus appears that pus microbes cannot exist in the presence of acetanilide; and that skin bacteria cannot multiply in its proximity. This drug seems to have great possibilities of usefulness in first aid to the injured in factories, in ambulance service, etc.

THE office of THE KANSAS MEDICAL JOURNAL has been removed from 723 to 631 Kansas avenue.

WE have a few copies of the "Antiseptic Club," which we will send with a year's subscription to the JOURNAL for $2.50.

WE will send you the JOURNAL for one year and a volumne of "Antsepsis and Antiseptics" for $1.75.

THE Kaw Pharmacal Company are combining animal nuclein with their preparation "Guaiacoline."

DR. S. G. STEWART is suffering from an attack of appendecites, but at this date is reported as improving.

IF you owe anything on your subscription kindly send us a little reminder.

MR. BROWN of Denver is sampling our physicians with antiphlogistine.